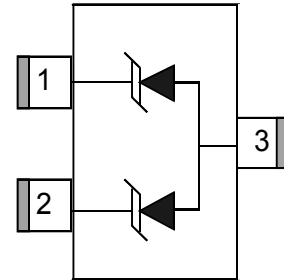


**Features**

- 300 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional and unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 120 pF$  typ.)
- Protection two datalines
- IEC 61000-4-2  $\pm 30 kV$  contact  $\pm 30 kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 20A (8/20 $\mu s$ )



**Applications**

- Dataline
- Automatic Teller Machines
- Net works
- Power line

**Mechanical Data**

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS Compliant

**Absolute Maximum Rating**

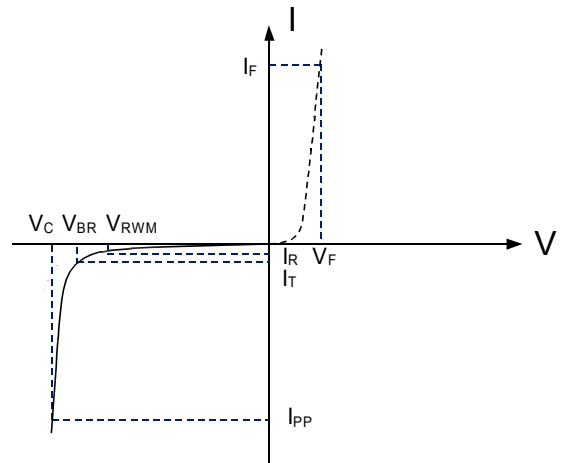
| Rating   | Symbol    | Value            | Units       |
|--|-----------|------------------|-------------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ )                         | $P_{PP}$  | 300              | Watts       |
| Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note 1)              | $I_{pp}$  | 20               | A           |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 30<br>30         | kV          |
| Lead Soldering Temperature                                     | $T_L$     | 260 (10 seconds) | $^{\circ}C$ |
| Junction Temperature   | $T_J$     | -55 to + 125     | $^{\circ}C$ |
| Storage Temperature  | $T_{stg}$ | -55 to + 125     | $^{\circ}C$ |

**Electrical Characteristics**

| Parameter                 | Symbol    | Conditions                                | Min | Typical | Max | Units   |
|---------------------------|-----------|---|-----|---------|-----|---------|
| Reverse Stand-Off Voltage | $V_{RWM}$ |   |     |         | 5   | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1mA$                                 | 6.0 | 7.0     | 8.5 | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5V, T=25^{\circ}C$               |     | 0.5     | 1   | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu s$                           |     |         | 20  | A       |
| Clamping Voltage          | $V_C$     | $I_{PP}=10A, t_p=8/20\mu s$               |     |         | 12  | V       |
|                           |           | $I_{PP}=20A, t_p=8/20\mu s$               |     |         | 16  | V       |
| Junction Capacitance      | $C_j$     | $V_R=0V, f=1MHz$<br>(pin1 - pin2 to pin3) |     | 120     |     | pF      |

**Electrical Parameters (TA = 25°C unless otherwise noted)**

| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |



Note: 8/20 $\mu s$  pulse waveform.

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

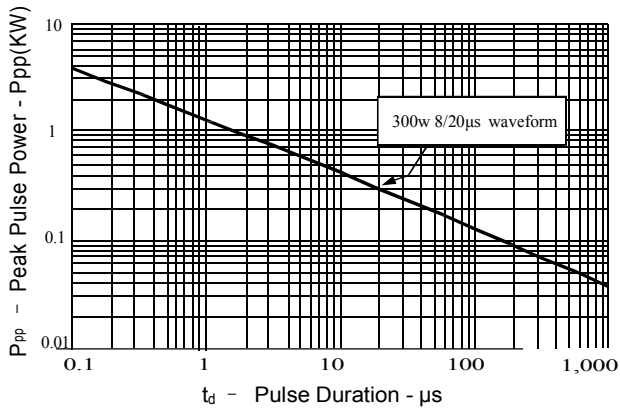


Figure 2: Power Derating Curve

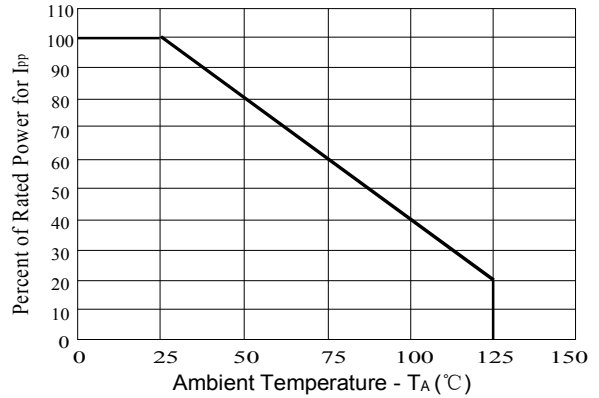


Figure 3: Pulse Waveform

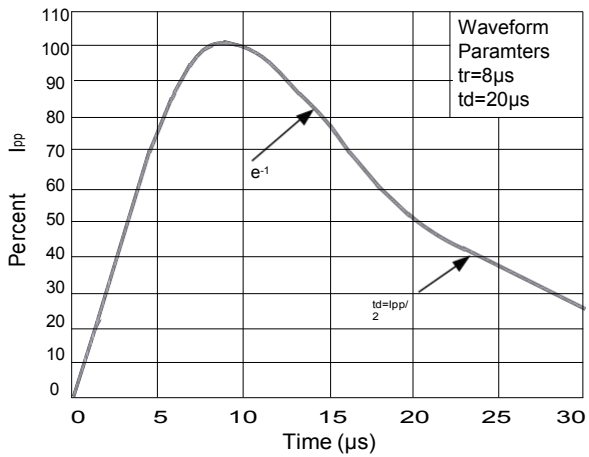
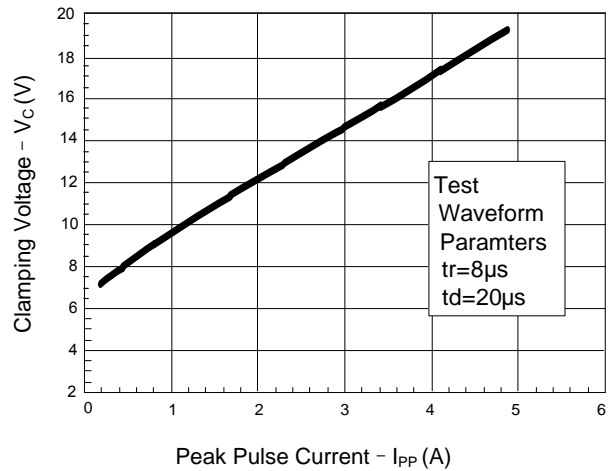
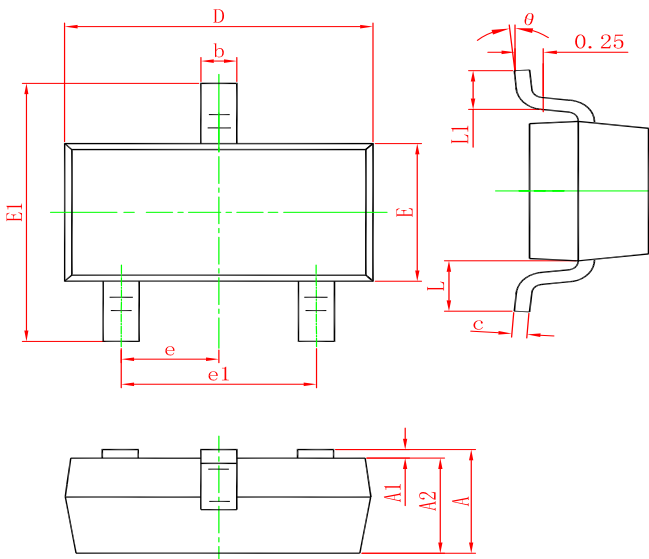


Figure 4: Clamping Voltage vs. Ipp



SOT-23 PACKAGE OUTLINE DIMENSIONS



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP.                |       | 0.037 TYP.           |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF.                |       | 0.022 REF.           |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

Marking



Ordering information

| Order code   | Package | Baseqty | Deliverymode  |
|--------------|---------|---------|---------------|
| UMW ESDA6V1L | SOT-23  | 3000    | Tape and reel |

单击下面可查看定价，库存，交付和生命周期等信息

[>>UMW\(友台半导体\)](#)